REMARKS

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salam (U.S. Patent No. 6,081,073) in view of Shen et al et al (U.S. Patent No. 6,414,661 B1)).

As to claim 1, while acknowledging that Salam does not teach an update calculator for creating an updated corrected value by combining a converted feedback signal with a corrected code value and storing an updated corrected code value in memory as required by the present claimed invention, the Examiner states that Shen teaches an updated calculator (16-18) for creating an updated corrected code (i.e. digital value of the current I_{N+1} stored in RAM 20) by combining the converted feedback signal (e.g., $I_o\tau_o$ generated by CCD camera; see column 3, lines 4-12) with the corrected code value (I_N), and storing the updated corrected code value (I_{N+1}) in the memory (see column 3. lines 1-12, column 6, lines 16-39, column 7, lines 9-15). The Examiner further states that Shen teaches a feedback loop providing converted feedback signal (e.g., $I_o\tau_o$) generated by a sensor (e.g., CCD camera) on the display device to update a corrected code value (I_N to I_{N+1}) as the same way as applicant's disclosed device (see Figure 2 of Shen), and that it would have been obvious to one of ordinary skill in the art at the invention was made to have used the update calculator of Shen to the microprocessor of Salam because the update calculator of Shen provides rapidly and accurately correct resulting non uniformities of an initially calibrated display during its life (see column 2, lines 48-56 of Shen). This rejection is respectfully traversed.

As previously explained, the invention is directed to a dynamic controller for a light emitting active-matrix display, the display being responsive to code values for producing a light output, that includes a photosensor located on the display for sensing the light output from the display and generating a feedback signal representative thereof; a feedback signal converter for converting the feedback signal to a converted feedback signal having the same form as the code value; a code-value corrector including a memory responsive to a code value for producing a corrected code value; and an update calculator for creating an updated corrected code value by combining the converted feedback signal with the corrected code value, and storing the updated corrected code value in the memory. The present invention thus relies upon a feedback loop employing a converted feedback signal generated by a sensor on the display device to update a corrected code value

used to adjust the display output. The controller of the present invention is referred to as a dynamic controller because the adjustments applied by the controller change over time as the feedback signal changes over time in response to changes in the characteristics of the display device. Because the present invention relies upon actual feedback and updated correction code values rather than a model of the active-matrix device behavior, it can be applied with few or no changes to a wide variety of devices. For example, if the light-emitting materials change or device-to-device variability is significant, no change to the design is necessary and the present invention will properly correct for any changes or variability.

Contrary to the Examiner's assertion, Shen does not combine a feedback signal from the display with a corrected output signal to form a new signal, as there is no feedback loop based on actual display light emissions which enables compensating for actual changes in the display performance over time. Shen instead accumulates the drive current sent to the display, and uses the accumulated drive current to modify the initial condition signal $I_o\tau_o$. This is not feedback based on actual display performance sensed by a photosensor. Figs. 2 and 3 do not illustrate any signal from the display. Fig. 3 shows the exponentiation circuit 18 of Fig. 2 in more detail. In Figs. 2 and 3, there is no feedback signal driving the multiplier 19, rather an accumulated value is applied. Moreover, in reviewing Fig. 9 (an alternative embodiment), there is no signal that goes from the voltage sensor 94 that is combined with an output from the RAM 91. Hence, Shen again does not combine a feedback signal from the display with a corrected output signal to form a new signal. The examiner cites col. 3, lines 1-12 (which relates to estimating correction or aging values and stores them as Examiner states) and col. 6, lines 16-39 (which talks about storing the values and then applying them to the display). Note, however, that there is no reference to combining any corrected values with a feedback signal to form an iterative process as described in the present invention. Col. 7, lines 9-15 describe a combination of the output values from the memory but then directs this value to the memory as shown in Fig. 2. Again, there is no combination with a feedback signal as required in the present invention. Simply put, there is no feedback loop wherein corrected code values associated with a desired display output are updated based on a converted feedback signal having the same form as the code values obtained from an actual measurement of the light output from the display. This is necessarily so as Shen

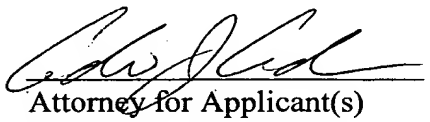
fails to provide any measurement of the actual light output of the display beyond the initial $I_o\tau_o$ calibration. A close examination of Shen confirms that there simply is no feedback loop as described and required in the present invention. The proposed combination of Shen and Salam accordingly can not result in the present claimed invention. Reconsideration of this rejection is accordingly strongly urged.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salam in view of Shen, as applied to claim 1 and further in view of Holloman (U.S. Patent No. 6,097,360).

As to claim 19, the Examiner further notes that Salam and Shen do not mention the controller and the display device integrated on a common substrate, and states that it would have been obvious to one of ordinary sill in the art at the time the invention was made to have used a common substrate for such types of elements as taught by Holloman so that the display device is more compact. Holloman, however, further fails to overcome the basic deficiencies of the combination of Salam and Shen with respect to the claimed invention. Reconsideration of this rejection is also therefore respectfully requested for the reasons set forth above.

In view of the foregoing remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the Examiner is earnestly solicited. Should the Examiner believe any remaining issues may be resolved via a telephone interview, the Examiner is encouraged to contact Applicants' representative at the number below to discuss such issues.

Respectfully submitted,



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